



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/711,820	10/07/2004	Robert P. Rouen	68.0496	5819

35204 7590 08/26/2009
SCHLUMBERGER RESERVOIR COMPLETIONS
14910 AIRLINE ROAD
ROSHARON, TX 77583

EXAMINER

ANDREWS, DAVID L

ART UNIT	PAPER NUMBER
----------	--------------

3672

NOTIFICATION DATE	DELIVERY MODE
-------------------	---------------

08/26/2009

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

VSOLIS2@SLB.COM
ABrown15@rosharon.oilfield.slb.com
jalverson@slb.com

Office Action Summary	Application No. 10/711,820	Applicant(s) ROUEN, ROBERT P.	
	Examiner David Andrews	Art Unit 3672	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 6/8/2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,4-11,13-16,18-20 and 22-31 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,4-11,13-16,18-20 and 22-31 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 October 2007 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

The amendment filed 6/8/2009 has been entered.

Response to Arguments

Applicant's arguments filed 6/8/2009 have been fully considered but they are not persuasive. Applicant argues that all claims now distinguish over Maloney et al. since the claims have been amended to recite that the injection tubular and a production tubular are "separate" and Maloney et al. discloses the two as attached. The examiner disagrees that this distinguishes over Maloney et al. because two objects may be both separate and attached, and the production pipe and sidestring of Maloney et al. are shown as such since "separate" as defined in Webster's II dictionary (3rd Ed.) means "set aside or distinct from others". The examiner notes applicant's figure 1 which shows the injection tool as separate, but also attached to a production tubular via a packer. Further, even though the sidestring of Maloney et al. is shown as connected to the production tubular, it may only be an artifact of the drawing since the flow into the sidestring is from the casing annulus and not the production tube, so even if they are attached as shown, it does not appear that they are necessarily attached for operation.

However, although the previous 102(b) rejection under Maloney et al. is maintained below, an alternative obviousness rejection of all claims is also presented which has the injection tool and production string as explicitly separately removeable and attached only via a packer, similar to applicant's figure 1.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 2, 4, 5, 7-11, 13-15, 24, 25, and 27 are rejected under 35 U.S.C. 102(b) as being anticipated by Maloney et al. (US 4,708,595). Maloney et al. disclose a gas injection tool and method comprising: a tubular member defining an axial bore therethrough (28) adapted to deliver a gas into a wellbore proximate a perforation interval via orifices, wherein the gas injection tool is separate from a tubing string for removing fluid from the wellbore (28 is shown as connected to 21, but is separate); a plurality of gas lift valves (30) attached to the tubular member, the gas lift valves adapted to regulate communication via the corresponding orifices, , from the axial bore of the tubular member to the wellbore at or below the perforation interval (fig 1 shows the apparatus as proximate the interval and although the injection is into tubular 21 the arrangement is considered equivalent since tubular 21 is open to the wellbore fluids via 24) and wherein the gas lift valves are configured to be opened in response to application of pressure applied by a flow of gas injected into the axial bore of the tubular member (col. 3, lines 28-37), wherein gas is injected through each of the gas lift valves that is opened to assist production of fluid from the wellbore (col. 1, lines 50-58, col. 4, lines 32-34); a sealing mechanism to seal the wellbore above the perforation interval (18); wherein the tubular is configured to engage the sealing mechanism (fig 1); wherein

Art Unit: 3672

the sealing mechanism is a dual port packer; wherein the tubular is adapted to inject a gas proximate the perforation interval of a gas or oil bearing well (the disclosure is directed to lifting hydrocarbon fluids which are either gas or oil); a tubular string adapted to produce fluid from the perforation interval via one port in the sealing mechanism (21); wherein the tubular string comprises one or more gas lift valves for injecting a gas into the well at a location above the sealing mechanism (36) and wherein the gas lift valves provided as part of the tubular string of the gas injection tool allows the gas lift valves to be separate from the tubing string (col. 4, lines 30-33).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 6, 26, 28, and 29-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Maloney et al. in view of McCulloch (US 2,894,587). Maloney et al. disclose all the limitations of this claim, as applied to claim 1 above, except for including a retrieving element on the tubular member, although Maloney et al. does teach that wireline retrieval of components is desirable (col. 4, lines 30-33). McCulloch discloses a completion apparatus with a similar arrangement to Maloney where the corresponding tubular member has a retrieval element (48). It should be noted that although valve 34 of Maloney et al. is shown as connected to tubular, the gas to feed 34a and 28 is fed

Art Unit: 3672

from the annulus 35 (col. 3, line 66 – col. 4, line 5) making it obvious to one of ordinary skill that the tubular 28 need not be connected to the production tubular (21), which would also allow the injection tool to be deployed separately from the production tubing string. Therefore it would have been obvious to one of ordinary skill at the time of invention to provide the tubular member of Maloney et al. with a retrievable element since applying a known technique (the retrievable member) to improve a known device is considered obvious to one of ordinary skill. (See MPEP 2141 III, rationale C).

Claims 16, 18-20, 22, and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Maloney et al. in view of Wellington et al. (US 5,031,697). Maloney et al. disclose all the limitations of this claim, as applied to claim 1 above, except for teaching that the valves are actuated at different pressures, or that a valve is closed once another is opened, although Maloney does disclose that the valves would be arranged according to methods known in the art (col. 3, lines 35-45). Wellington et al. teach that known methods of operating gas lift well include opening a first valve in response to a first pressure and a second valve in response to a second, different pressure (col. 2, lines 67-68); wherein once a second valve is opened, the first closes (col. 3, lines 4-6); and wherein the valves are configured to sequentially activate (col. 3, lines 1-4). It is noted that the gas lift valves of Wellington are on the production tubing above the perforations, but the teachings as applicable to any gas lift system are considered equivalently relevant to the system of Maloney et al. since the principles of operation are the same. Therefore it would have been obvious to one of ordinary skill in

Art Unit: 3672

the art at the time of invention to operate the valves of Maloney et al., as is known in the art and taught by Wellington, since applying a known technique to a known device where the result yields predictable results is considered obvious to one of ordinary skill (See MPEP 2141 III, rationale D).

Claims 1, 2, 4-11, 13-15, and 24-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over McCulloch (US 2,894,587) in view of Maloney et al. (US 4,708,595). McCulloch discloses a gas injection tool, system and method comprising: a tubular member (40) defining an axial bore therethrough, the axial bore adapted to deliver a gas into a wellbore proximate a perforation interval via an orifice (col. 3, line 51-52, injection of any fluid; col. 4, lines 32-40, may be any length proximate the perforations as shown), wherein the gas injection tool is separate from a tubing string for removing fluid from the wellbore (fig 1); wherein the tubular member is configured to engage a sealing mechanism (23) that seals the wellbore above the perforation interval (fig 1); wherein the tubular member is adapted to inject a gas proximate the perforation interval of a gas-bearing or oil bearing well (would equivalently work with either); a retrieving element (48) attached to the tubular element; a tubular string (22) adapted to produce fluid from the perforation interval via one port in the sealing mechanism (fig 1); wherein the sealing mechanism is a dual port packer (fig 1); and wherein the tool is configured to be deployable into the wellbore separately from the tubing string (fig 1). McCulloch does not disclose a plurality of gas lift valves on the tool. Maloney et al. disclose a gas injection tool, system and method comprising a sidestring (28) through a dual port

Art Unit: 3672

packer, wherein the sidestring has a plurality of gas lift valves (30) which are adapted to regulate communication, via orifices, from the axial bore of the sidestring to the wellbore at or below a perforation interval (fig 1, 21 is open to wellbore fluids) and are configured to be opened in response to application of pressure applied by a flow of gas injected into the axial bore of the tubular member (col. 3, lines 28-37), wherein the gas is injected through each of the gas lift valves that is opened to assist production of fluid from the wellbore (col. 1, lines 50-58, col. 4, lines 32-34); wherein the tubular string comprises one or more gas lift valves (36) for injecting a gas into the well at a location above the sealing mechanism, wherein the gas lift valves are arranged on a side of the tubular to enable injected gas to pass in a radial direction of the tubular member into the wellbore through corresponding orifices (fig 1), wherein the gas lift valves are separate from the tubular string (col. 4, lines 30-33). It would have been obvious to one of ordinary skill in the art to include multiple orifices with gas lift valves on the injection tool and production string of McCulloch, as taught by Maloney et al., in order to provide additional production assist means since combining prior art elements according to known techniques to yield predictable results is considered obvious to one of ordinary skill.

Claims 16, 18-20, 22, 23 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over McCulloch (US 2,894,587) in view of Maloney et al. (US 4,708,595) and further in view of Wellington et al. (US 5,031,697). McCulloch and Maloney et al. disclose all the limitations of these claims, as applied to claims 1 and 7 above, except

Art Unit: 3672

for teaching that the valves are actuated at different pressures, or that a valve is closed once another is opened, although Maloney does disclose that the valves would be arranged according to methods known in the art (col. 3, lines 35-45). Wellington et al. teach that known methods of operating gas lift in a well include opening a first valve in response to a first pressure and a second valve in response to a second, different pressure (col. 2, lines 67-68); wherein once a second valve is opened, the first closes (col. 3, lines 4-6); and wherein the valves are configured to sequentially activate (col. 3, lines 1-4). It is noted that the gas lift valves of Wellington are on the production tubing above the perforations, but the teachings as applicable to any gas lift system are considered equivalently relevant to the system of Maloney et al. since the principles of operation are the same. Therefore it would have been obvious to one of ordinary skill in the art at the time of invention to operate the valves of Maloney et al. as applied to the system and methods of McCulloch, as is known in the art and taught by Wellington, since applying a known technique to a known device where the result yields predictable results is considered obvious to one of ordinary skill.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David Andrews whose telephone number is (571)272-6558. The examiner can normally be reached on M-F, 8:30-6:00.

Art Unit: 3672

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Bagnell can be reached on (571)272-6558. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/David J. Bagnell/
Supervisory Patent Examiner, Art Unit 3672

DLA
8/19/09